REMARKS

Claims 1-2, 5-7, 9-18, 20-34 are pending.

Claims 3, 4, 8, 19, and 35 have been cancelled, without prejudice.

Claims 36-38 have been added.

In the Office Action mailed February 3, 2010, the specification was objected to; claims 1, 2, 4-18, 20, 21, 24-34 were rejected under 35 U.S.C. § 103(a) as unpatentable over Dehnert (U.S. Patent No. 6,059,839) in view of Goebel (U.S. Patent No. 6,289,505) and claims 22, 23, and 35 were rejected under 35 U.S.C. § 103(a) as unpatentable over Dehnert in view of Goebel and further in view of Lohmann (U.S. Patent No. 5,826,087).

OBJECTION TO THE SPECIFICATION

The phrase "computer-readable storage medium" has been added to the paragraph on page 3, starting at line 26. No new matter has been added since "computer-readable storage medium" is an example of the memory system 204 disclosed by the original specification. Withdrawal of the specification objection is therefore respectfully requested.

REJECTION UNDER 35 U.S.C. § 112, ¶ 2

Claim 22 has been amended to address the § 112, ¶ 2, rejection.

REJECTIONS UNDER 35 U.S.C. § 103

Claim 1 has been amended to tie the various tasks of claim 1 to a machine or apparatus, in the form of a "processing device." Support for this amendment can be found in Fig. 2 and the accompanying text. Claim 1 has also been amended to recite that the object code included in the second file of claim 1 is machine-executable object code. Support for this amendment can be found at least in the following passages: page 5, lines 25-26; page 6, lines 24-25. Claim 1 has also been amended to recite that the SIR (summary intermediate representation) includes information relating to symbols accessed by a procedure in the object code. Support for this amendment can be found at least on

page 9, at lines 13-16. In addition, claim 1 has been amended to incorporate subject matter from former dependent claim 4.

Similar support exists for the amendments of independent claims 26 and 31.

It is respectfully submitted that claim 1 is non-obvious over Dehnert and Goebel.

To make a determination under 35 U.S.C. § 103, several basic factual inquiries must be performed, including determining the scope and content of the prior art, and ascertaining the differences between the prior art and the claims at issue. *Graham v. John Deere Co.,* 383 U.S. 1, 17, 148 U.S.P.Q. 459 (1965). Moreover, as held by the U.S. Supreme Court, it is important to identify a reason that would have prompted a person of ordinary skill in the art to combine reference teachings in the manner that the claimed invention does. *KSR International Co. v. Teleflex, Inc.,* 127 S. Ct. 1727, 1741, 82 U.S.P.Q.2d 1385 (2007).

The Office Action argued that Dehnert discloses the elements of claim 1, except for the extension to a linker symbol table contained in the object file summary information of claim 1. 02/03/2010 Office Action at 4. Instead, the Office Action cited Goebel as purportedly disclosing this claimed feature. *Id.*

As purportedly disclosing accessing a second file for a second module including object code and object file summary information, the Office Action cited the following passage of Dehnert: column 6, lines 13-17. This passage of Dehnert refers to a data object that is being pointed to. Dehnert, 6:13-14. As noted elsewhere in Dehnert, an object of code is considered data that is in memory. *Id.*, 2:13-14. Also, Dehnert refers to an address of a data object and a program using the address to access a data object that is an operand in an expression. *Id.*, 6:8-11. Thus, it is clear that the term "data object" in the cited column 6 passage of Dehnert refers to data, and does not constitute the machine-executable object code that is part of the second file of claim 1.

Even more fundamentally, it is noted that the object file summary information is included in the second file that also includes the machine-executable object code. This object file summary information includes a summary intermediate representation (SIR) and an extension to a linker symbol table. The SIR of claim 1 includes information relating to symbols accessed by a procedure in the object code, and the extension to a

linker symbol table includes a flag indicating whether the procedure exposes a memory address by storing the memory address in a location accessible outside the procedure.

As purportedly disclosing the SIR of claim 1, the Office Action cited column 6, lines 14-25, of Dehnert. This passage of Dehnert refers to an IPL (inter-procedural local summary) summarizing and flagging various cases in an IPL summary table. *Id.*, 6:14-16. The IPL summary table is placed into an IRF (intermediate representation file) along with previous information in the IRF. *Id.*, 6:15-17. The IRF contains processed source code in an intermediate representation format. *Id.*, 6:19-20. Importantly, note that the information in the IRF is for source code in an intermediate representation format. This intermediate representation format is not machine-executable object code. Thus, the IRF cannot be considered the "second file" of claim 1, which includes both the machine-executable object code and the object file summary information as specifically defined in claim 1.

In fact, as explained in Dehnert, a source code file is compiled by a compiler. *Id.*, 5:15-17. The various information that is collected and placed into the IRF is based on compiling of such source code file. Thus, ultimately, the IRF is produced based on processing and analyzing the source code file—however, the IRF never contains both machine-executable object code and object file summary information as specifically defined by claim 1.

The IRF of Dehnert is further processed by an inter-procedural analysis phase, which outputs address-taken information about all global variables and formal parameter variables. *Id.*, 6:26-34. In a global optimization phase, a back-end of the compiler uses the address-taken information from the summary tables generated by the inter-procedural local summary phase and the inter-procedural analysis phase to optimize the source code as thoroughly as possible, including disambiguation of memory references. *Id.*, 6:35-42. The output of the global optimization phase is a fully optimized, machine-executable code. *Id.*, 6:45-48.

It is thus clear from the discussion in columns 5 and 6 of Dehnert that the IRF and other summary information generated based on processing and analysis of the source code file would not include both machine-executable object code and object file summary information as claimed.

The secondary reference, Goebel, also does not provide any teaching or hint of the claimed subject matter that is missing from Dehnert. As depicted in Fig. 4 of Goebel, a disassembler is provided to disassemble a binary executable into an intermediate representation. Goebel, 7:8-10. The disassembler procedure of Goebel is also able to recreate a program's symbol table. *Id.*, 7:13-16. However, there is no teaching in Goebel regarding a second file that includes both machine-executable object code as well as object file summary information that includes both the SIR and the extension to the linker symbol table recited in claim 1.

Thus, it is clear that even if Dehnert and Goebel could be hypothetically combined, the hypothetical combination of the references would not have led to the claimed subject matter.

Moreover, in view of the significant differences between the claimed subject matter and the teachings of Dehnert and Goebel, a person of ordinary skill in the art would not have been prompted to combine the teachings of these references to achieve the claimed subject matter.

Claim 1 is therefore non-obvious over Dehnert and Goebel.

Independent claims 26 and 31 are allowable for similar reasons as claim 1.

Dependent claims, including newly added dependent claims 36-38, are allowable for at least the same reasons as corresponding independent claims. In view of the allowability of base claims over Dehnert and Goebel, the obviousness rejection of dependent claims over Dehnert, Goebel, and Lohmann has been overcome.

In view of the foregoing, allowance of all claims is respectfully requested.

The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 08-2025 (200313024-1).

Respectfully submitted,

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